(Biogenic) and Fossil-Derived Carbon Dioxide Emitted from Stationary Emissions Sources (incorporated by reference, see §98.7). Perform the ASTM D7459–08 sampling and the ASTM D6866–08 analysis at least once in every calendar quarter in which MSW is combusted in the unit. Collect each gas sample during normal unit operating conditions for at least 24 total (not necessarily consecutive) hours, or longer if the facility deems it necessary to obtain a representative sample. Notwithstanding this requirement, if the types of fuels combusted and their relative proportions are consistent throughout the year, the minimum required sampling time may be reduced to 8 hours if at least two 8-hour samples and one 24-hour sample are collected under normal operating conditions, and arithmetic average of the biogenic fraction of the flue gas from the 8-hour samples (expressed as a decimal) is within ±5 percent of the biogenic fraction from the 24-hour test. There must be no overlapping of the 8-hour and 24-hour test periods. Document the results of the demonstration in the unit's monitoring plan. If the types of fuels and their relative proportions are not consistent throughout the year, an optional sampling approach that facilities may wish to consider to obtain a more representative sample is to collect an integrated sample by extracting a small amount of flue gas (*e.g.*, 1 to 5 cc) in each unit operating hour during the quarter. Separate the total annual CO_2 emissions into the biogenic and non-biogenic fractions using the average proportion of biogenic emissions of all samples analyzed during the reporting year. Express the results as a decimal fraction (*e.g.*, 0.30, if 30 percent of the CO_2 is biogenic). When MSW is the primary fuel for multiple units at the facility, and the units are fed from a common fuel source, testing at only one of the units is sufficient.

(e) For other units that combust combinations of biomass fuel(s) (or heterogeneous fuels that have a biomass component, *e.g.*, tires) and fossil (or other non-biogenic) fuel(s), in any proportions, ASTM D6866–08 (incorporated by reference, see §98.7) and ASTM D7459–08 (incorporated by reference, see §98.7) may be used to determine the biogenic portion of the CO_2 emissions in every calendar quarter in which biomass and non-biogenic fuels are co-fired in the unit. Follow the procedures in paragraph (d) of this section. If the primary fuel for multiple units at the facility consists of tires, and the units are fed from a common fuel source, testing at only one of the units is sufficient.

(f) The records required under §98.3(g)(2)(i) shall include an explanation of how the following parameters are determined from company records (or, if applicable, from the best available information):

(1) Fuel consumption, when the Tier 1 and Tier 2 Calculation Methodologies are used, including cases where §98.36(c)(4) applies.

(2) Fuel consumption, when solid fuel is combusted and the Tier 3 Calculation Methodology is used.

(3) Fossil fuel consumption when §98.33(e)(2) applies to a unit that uses CEMS to quantify CO_2 emissions and that combusts both fossil and biomass fuels.

(4) Sorbent usage, when §98.33(d) applies.

(5) Quantity of steam generated by a unit when §98.33(a)(2)(iii) applies.

(6) Biogenic fuel consumption and high heating value, as applicable, under §§98.33(e)(5) and (e)(6).

(7) Fuel usage for CH_4 and N_2O emissions calculations under §98.33(c)(4)(ii).

(8) Mass of biomass combusted, for premixed fuels that contain biomass and fossil fuels under §98.33(e)(1)(iii).

[74 FR 56374, Oct. 30, 2009, as amended at 75 FR 79146, Dec. 17, 2010]

§98.35 Procedures for estimating missing data.

Whenever a quality-assured value of a required parameter is unavailable (e.g., if a CEMS malfunctions during unit operation or if a required fuel sample is not taken), a substitute data value for the missing parameter shall be used in the calculations.

(a) For all units subject to the requirements of the Acid Rain Program, and all other stationary combustion units subject to the requirements of this part that monitor and report emissions and heat input data year-round in

accordance with part 75 of this chapter, the missing data substitution procedures in part 75 of this chapter shall be followed for CO_2 concentration, stack gas flow rate, fuel flow rate, high heating value, and fuel carbon content.

(b) For units that use the Tier 1, Tier 2, Tier 3, and Tier 4 Calculation Methodologies, perform missing data substitution as follows for each parameter:

(1) For each missing value of the high heating value, carbon content, or molecular weight of the fuel, substitute the arithmetic average of the quality-assured values of that parameter immediately preceding and immediately following the missing data incident. If the ''after'' value has not been obtained by the time that the GHG emissions report is due, you may use the ''before'' value for missing data substitution or the best available estimate of the parameter, based on all available process data (e.g., electrical load, steam production, operating hours). If, for a particular parameter, no quality-assured data are available prior to the missing data incident, the substitute data value shall be the first quality-assured value obtained after the missing data period.

(2) For missing records of CO_2 concentration, stack gas flow rate, percent moisture, fuel usage, and sorbent usage, the substitute data value shall be the best available estimate of the parameter, based on all available process data (e.g., electrical load, steam production, operating hours, etc.). You must document and retain records of the procedures used for all such estimates.

[74 FR 56374, Oct. 30, 2009, as amended at 75 FR 79150, Dec. 17, 2010]

§ 98.36 Data reporting requirements.

(a) In addition to the facility-level information required under § 98.3, the annual GHG emissions report shall contain the unit-level or process-level emissions data in paragraphs (b) through (d) of this section (as applicable) and the emissions verification data in paragraph (e) of this section.

(b) *Units that use the four tiers.* You shall report the following information for stationary combustion units that use the Tier 1, Tier 2, Tier 3, or Tier 4 methodology in § 98.33(a) to calculate CO_2 emissions, except as otherwise provided in paragraphs (c) and (d) of this section:

(1) The unit ID number.

(2) A code representing the type of unit.

(3) Maximum rated heat input capacity of the unit, in mmBtu/hr.

(4) Each type of fuel combusted in the unit during the report year.

(5) The methodology (*i.e.,* tier) used to calculate the CO_2 emissions for each type of fuel combusted (*i.e.,* Tier 1, 2, 3, or 4).

(6) The methodology start date, for each fuel type.

(7) The methodology end date, for each fuel type.

(8) For a unit that uses Tiers 1, 2, or 3:

(i) The annual CO_2 mass emissions (including biogenic CO_2), and the annual CH_4, and N_2O mass emissions for each type of fuel combusted during the reporting year, expressed in metric tons of each gas and in metric tons of CO_2e; and

(ii) Metric tons of biogenic CO_2 emissions (if applicable).

(9) For a unit that uses Tier 4:

(i) If the total annual CO_2 mass emissions measured by the CEMS consists entirely of non-biogenic CO_2 (*i.e.,* CO_2 from fossil fuel combustion plus, if applicable, CO_2 from sorbent and/or process CO_2), report the total annual CO_2 mass emissions, expressed in metric tons. You are not required to report the combustion CO_2 emissions by fuel type.

(ii) Report the total annual CO_2 mass emissions measured by the CEMS. If this total includes both biogenic and non-biogenic CO_2, separately report the annual non-biogenic CO_2 mass emissions and the annual CO_2 mass emissions from biomass combustion, each expressed in metric tons. You are not required to report the combustion CO_2 emissions by fuel type.

(iii) An estimate of the heat input from each type of fuel listed in Table C–2 of this subpart that was combusted in the unit during the report year, and the annual CH_4 and N_2O emissions for each of these fuels, expressed in metric tons of each gas and in metric tons of CO_2e.